



143

HAUNTEDTM CASTLE

INSTRUCTION MANUAL

Haunted CastleTM is a registered
trademark of Konami Inc. © 1988 Konami Inc.

 **KONAMI®** is a trademark of Konami Industry Co., Ltd.

TABLE OF CONTENTS

	Page		Page
Conversion Kit Contents . . . Inside Front Cover		Technical Information	9
Introduction	1	Troubleshooting Guide	9
Graphics	2	Wiring Harness Color Code	10
New Product Information	3	Wiring Diagram	11
Monitor Information	4	Dip Switch Settings	12

CONVERSION KIT CONTENTS:

- MAIN PRINTED CIRCUIT BOARD
- P.C.B. CAGE (FCC REQUIRED)
- CONNECTING WIRING HARNESS
- 6 SETS — PRE-PRINTED BUTTON ASSEMBLIES
- ONE 4-WAY JOYSTICK
- MARQUEE (HEADER)
(1/8" acrylic sheet)
- ONE SET SIDE PANEL GRAPHICS (left & right)
- CONTROL PANEL OVERLAY
- MANUAL
- REGISTRATION CARD

REPLACEMENT ACCESSORIES ARE AVAILABLE THROUGH YOUR DISTRIBUTOR.

THIS KIT USABLE FOR UPRIGHT VIDEO GAMES WITH A
RASTAR SCAN MONITOR WHICH IS OR CAN BE MOUNTED HORIZONTALLY.

HAUNTED CASTLE: INTRODUCTION

KONAMI CONVERSION KITS are the most complete conversion kits available today. Every detail has been carefully considered, designed and packaged to provide you the means of easily producing a professional conversion.

These kits have all the accessories to easily convert your UPRIGHT video game.

We strongly urge you to FULLY STUDY this instruction manual BEFORE you begin your conversion. It contains step-by-step instructions, schematic diagrams and suggestions on how to install your Konami Conversion Kit and maximize your profits.

Haunted Castle can be installed in any horizontally-mounted raster scan monitor game.

Everything you will need to construct your new game is provided in this kit. All accessory parts—wiring harness, joystick, etc. are custom made for Haunted Castle by top engineers experienced in the coin-op industry. One 4-way joystick (as provided) MUST be used.

★ ★ ★ IMPORTANT NOTICE ★ ★ ★

The Japanese Amusement Machine Manufacturers Association (JAMMA) has introduced a new standard in video game P.C.B.'s. It was decided that all new products from any JAMMA member will use the same pin print-out on the edge connector. The edge connector will have 56 pin outs, 28 per side.

Konami Inc. will offer a 56 to 36 pin adaptor P.C.B. available through your distributor. This new adaptor P.C.B. will enable the new 56 pin out to adapt to Konami's old standard 36 pin out.

PUTTING YOUR BEST GAME FORWARD

PREPARATION:

For best results, all old graphics should be removed completely from the cabinet. "Stick-on" graphics can be removed by using a hairdryer or hot air device. The heat from the dryer will loosen the adhesive, allowing you to easily peel them off — any adhesive residue can be cleaned off with acetone and a soft dry cloth. (DO NOT USE ACETONE ON SURFACES PAINTED WITH FLAT PAINT.)

TOOLS YOU NEED:

1. Foaming Aerosol (such as "Windex").
2. Soft Squeegee.
3. X-Acto Knife.

SIDE PANEL DECALS

1. Spray area of cabinet where Side Panel decals are to be applied with foaming aerosol or a mild soap solution.
2. Remove protective backing from decals.
3. Position decals into place.
4. With a soft squeegee, beginning from the center of the decal, slowly and evenly press out excess foam until you achieve a smooth finish.
5. Allow to set approximately 2 to 3 hours before handling. Maximum adherence is achieved in 48 to 72 hours.

6. Trim side decal to fit your cabinet.

CONTROL PANEL OVERLAY:

1. Refer to Recommended Control Panel Layout on page 6.
2. Drill any new holes needed.
3. Plug any holes that will not be used. (A permanent epoxy filler works well for this step.)
4. Pre-position the overlay prior to removing the backing.
5. Slowly apply the overlay — inch by inch on the control panel, removing the backing as you apply it.
6. Once it's in place, by using an X-Acto knife, cut around the button and joystick placements.

FCC WARNING LABEL:

FCC Warning Label must be applied to the outside of the cabinet near the line cord entry.

MARQUEE

(WEAR PROTECTIVE GLASSES WHILE TRIMMING MARQUEE)

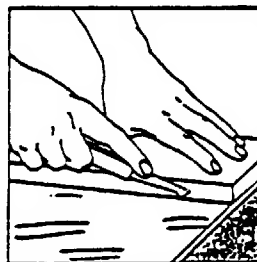
1/8" Acrylic Marquee should be cut to fit your game. DO NOT remove protective mask until this is done.

One way of cutting your Marquee is as follows: (Be sure to protect painted side of Marquee from any surface which may scratch or mar finish).

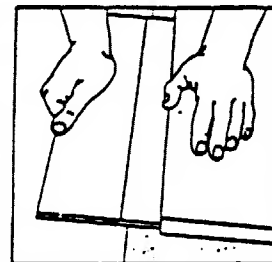
CUTTING WITH A KNIFE OR SCRIBER

Acrylic sheet up to 3/16" thick may be cut by a method similar to that used for cutting window glass. Use a scribe of some kind — a scribing knife such as the one pictured, a metal scribe, an awl, or even a sturdy craft knife — to score the sheet. Draw the scribe several times (7 or 8 times for a 3/16" thick piece) along a straight edge held firmly in place. It is best not to remove the protective masking. Make the cuts carefully using firm, even pressure. For best results make each stroke cleanly off the edge of the sheet.

Then clamp the acrylic sheet or hold it rigidly under a straight edge with the scribe mark hanging just over the edge of a table. Protect your hands with a cloth, and apply a sharp downward pressure to the other side of the sheet. It will break along the scratch. Scrape the edges to smooth any sharp corners. This method is not recommended for long breaks or thick material.



Always draw the scribing knife along a straight edge.



Break sheet over edge of table after scribing.

P.C.B. CAGE INSTALLATION

Konami, Inc. now supplies a new style P.C.B. cage which is superior to old style cages because of ease of installation. The cage is made of a 32 point stem-stock which is fire retardant.

TO INSTALL THE CAGE:

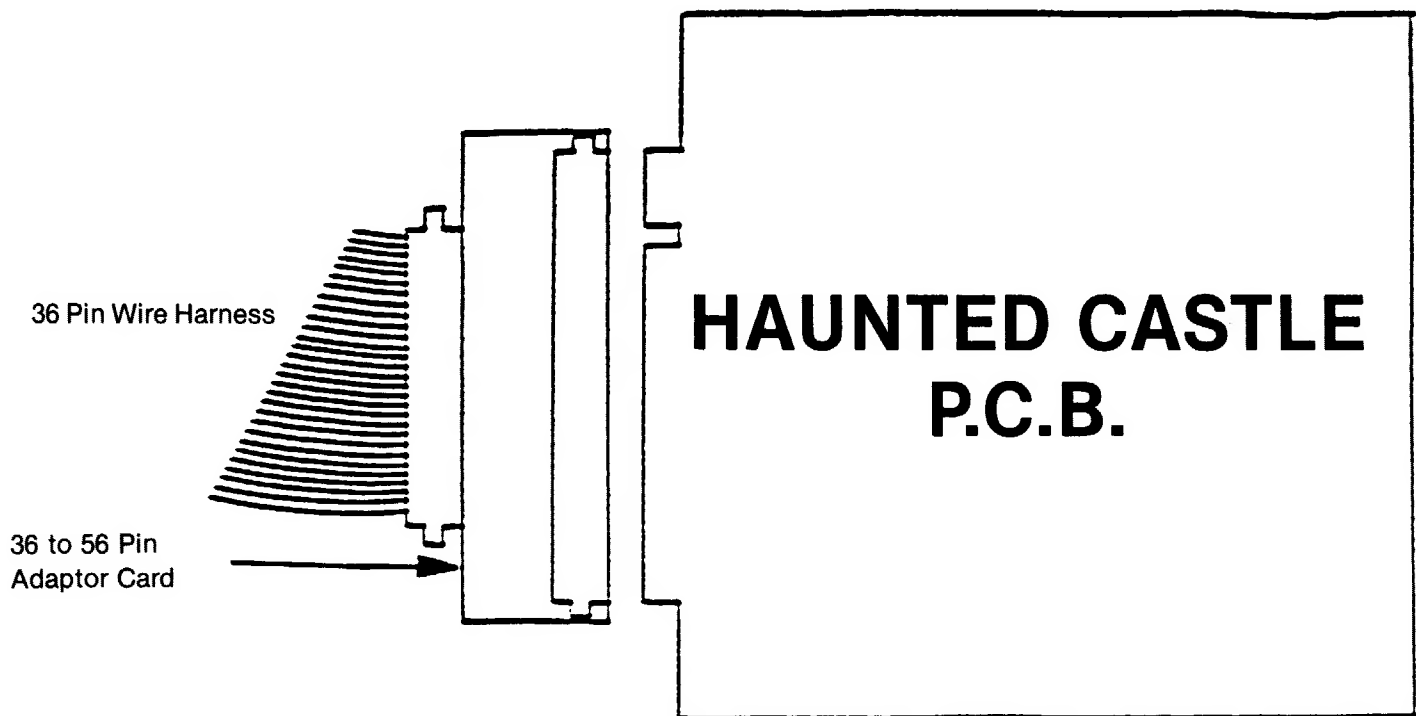
1. Open cage bottom and secure to desired P.C.B. position.
2. Install printed circuit board inside cage using wood screws, screwed through the cage bottom into cabinet side.
3. Close the cage over printed circuit board and secure with latch on cage.

NEW PRODUCT FROM



All new Konami P.C.B.'s utilize a 56 pin edge connector. This connector complies with the standard set by JAMMA (Japanese Amusement Machine Manufacturers Association). However, all Konami P.C.B.'s manufactured prior to Top Gunner utilize a 36 pin edge connector. These games include Super Cobra, Scramble, Pooyan, Locomotion, Circus Charlie, L'il Hustler, Juno First, Time Pilot, Gyruss, Tutankham, Turtles, Super Basketball, Mega Zone, Pandora's Palace, Time Pilot '84, Track 'N' Field, Hypersports, Road Fighter, Yie-Ar Kung Fu, Kicker, Rush 'N' Attack, Mikie, Frogger, Amidar, Roc 'N' Rope, The End, Jail Break, and Nemesis.

Because of the large amount of video game cabinets that are wired for Konami's old standard edge connector, Konami now offers 36 to 56 pin adaptor P.C.B.'s. This adaptor P.C.B. enables you to simply plug in a new 56 pin JAMMA P.C.B. (not only Konami's) **rather than rewiring.**



Please contact your distributor for price and delivery!

HAUNTED CASTLE: MONITOR INFORMATION

SERVICE INSTRUCTIONS

NOTE: All monitors are equipped with automatic degaussing coils (L701) which demagnetize the picture tube every time the monitor is turned on after being off for a minimum of 5 minutes. Should any part of the chassis become magnetized it will be necessary to degauss the affected area with a manual degaussing coil. Move the coil slowly around the CRT face and all surrounding metal parts. Then slowly withdraw for a distance of 6 feet before turning off.

1.0 BLACK LEVEL CONTROL ADJUSTMENT

This control has been set at the factory and should not need further attention, however, when the game is connected a slight adjustment of VR201 may be necessary to obtain the proper black level (the black portion of the picture just extinguished).

2.0 VERTICAL SIZE (HEIGHT)

Location of this control is shown in Fig. 1. This control must be adjusted slowly, if necessary, until the picture or test pattern attains the correct vertical proportions.

3.0 CIRCUIT PROTECTION

A 4.0A pigtail fuse, mounted on the Main Board has been provided to protect the Power Output Circuit.

4.0 FOCUS

Adjust the focus control, located on the HV unit (T352), for maximum over-all definition and fine picture detail.

5.0 HORIZONTAL HOLD CONTROL ADJUSTMENT, VR351 (See Fig. 1)

A warm-up period of at least five minutes should be allowed before alignment is carried out. With the monitor being driven from the game signal, short TP601 to TP31. Adjust VR351 until the picture stops sliding horizontally. Remove the short.

6.0 HORIZONTAL VIDEO POSITION

If the video is off center on the raster some compensation can be made by adjusting this control.

7.0 VERTICAL RASTER POSITION ADJUSTMENT

If the video is off center vertically, (short dimension of picture tube) some compensation can be made by moving the vertical raster position adjustment jumper to either positions "U" or "D".

8.0 HORIZONTAL RASTER POSITION ADJUSTMENT

If the video is off center horizontally (long dimension of the picture tube) some compensation can be made by moving the horizontal raster position adjustment jumper to either positions "R" or "L".

9.0 HORIZONTAL WIDTH ADJUSTMENT

The horizontal width coil is a hexagonal tuning tool adjustment. This control must be adjusted slowly, if necessary, until the picture or test pattern attains the correct horizontal proportions.

* KONAMI GAMES ARE ALL NEGATIVE COMPOSIT SYNC.
USE THE THREE PIN CONNECTOR ON THE MONITOR.

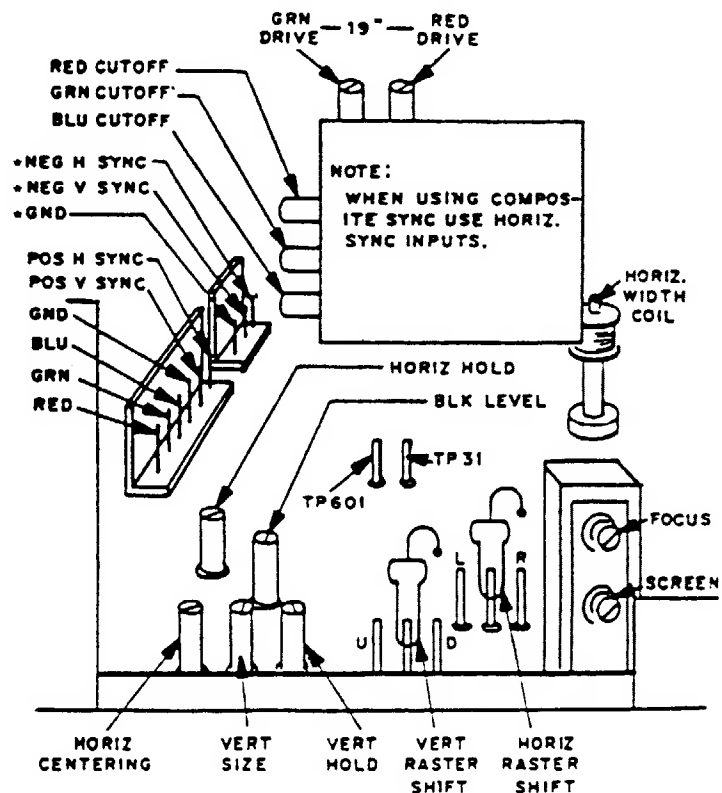
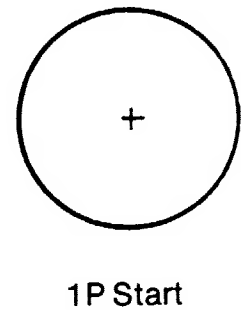
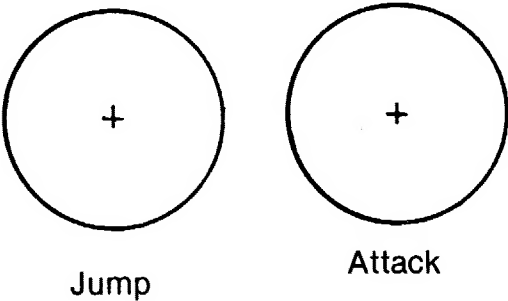


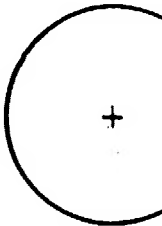
FIGURE 1

HAUNTED CASTLE CONTROL PANEL DRILLING TEMPLATE

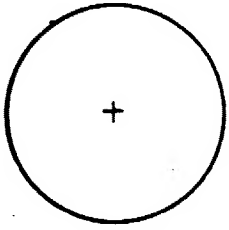
(Recommended Control Panel Design)



WICO Joys



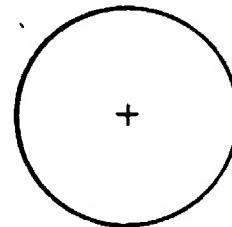
REMOVE TEMPLATE CAREFULLY



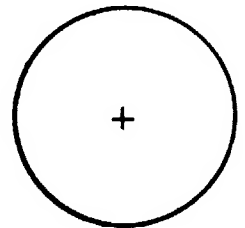
2P Start



ystick



Attack



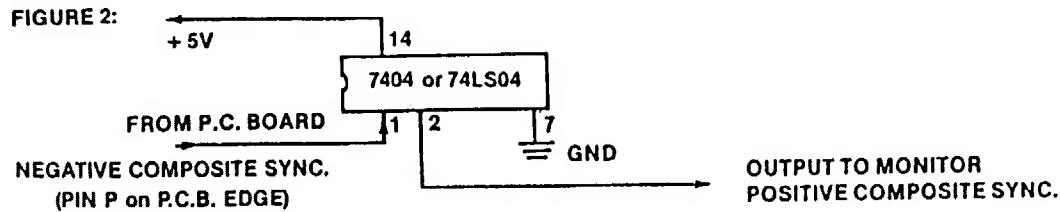
Jump

HAUNTED CASTLE: TECHNICAL INFORMATION

Haunted Castle requires horizontally mounted monitor. It also generates composite negative sync. If your monitor is composite positive sync, you will have to change to composite negative sync.

To alternate composite positive sync to composite negative sync, use 7404 IC or 74LS04 IC. The signal on the output pin from the P.C.B. is a combination of H-sync and V-sync.

NOTE: Please refer to Figure 2.



(+ 5V NS GND should be taken out of the P.C. Board.)

TROUBLE SHOOTING GUIDE

PROBLEM:	POSSIBLE SOLUTION
No Screen or Constant Reset	<ol style="list-style-type: none">1). Check + 5 V line at the P.C.B.2). Make sure all socketed eproms and custom IC's are seated securely. Apply light pressure to secure.3). Check harness to be sure it is not on backwards.4). Check connectors between P.C.B.'s for secure fit.
No Sound	<ol style="list-style-type: none">1). Check + 12V line at the P.C.B.2). Make sure both speaker out wires are connected to the speakers. (DO NOT CONNECT A GROUND.)
Distorted Sound	<ol style="list-style-type: none">1). Replace cabinet speaker.
I/O Problem (coin 1 doesn't work or Joystick Up doesn't work, etc.)	<ol style="list-style-type: none">1). Do not hook a coin counter to the coin 1 or coin 2 outputs. This will cause damage.2). Check your schematic for the 74LS253 IC that corresponds to your I/O problem. Check the appropriate pin with a scope or multimeter for a high output (5V), if output is low replace the 74LS253.

CAUTION

DO NOT WIRE COIN COUNTERS TO THE COIN 1 OR COIN 2 OUTPUTS. THIS WILL CAUSE DAMAGE TO THE I/O MICROCHIP 74LS253. COIN COUNTERS CAN ONLY BE WIRED TO COIN COUNTER OUTPUTS.

HAUNTED CASTLE: WIRING HARNESS

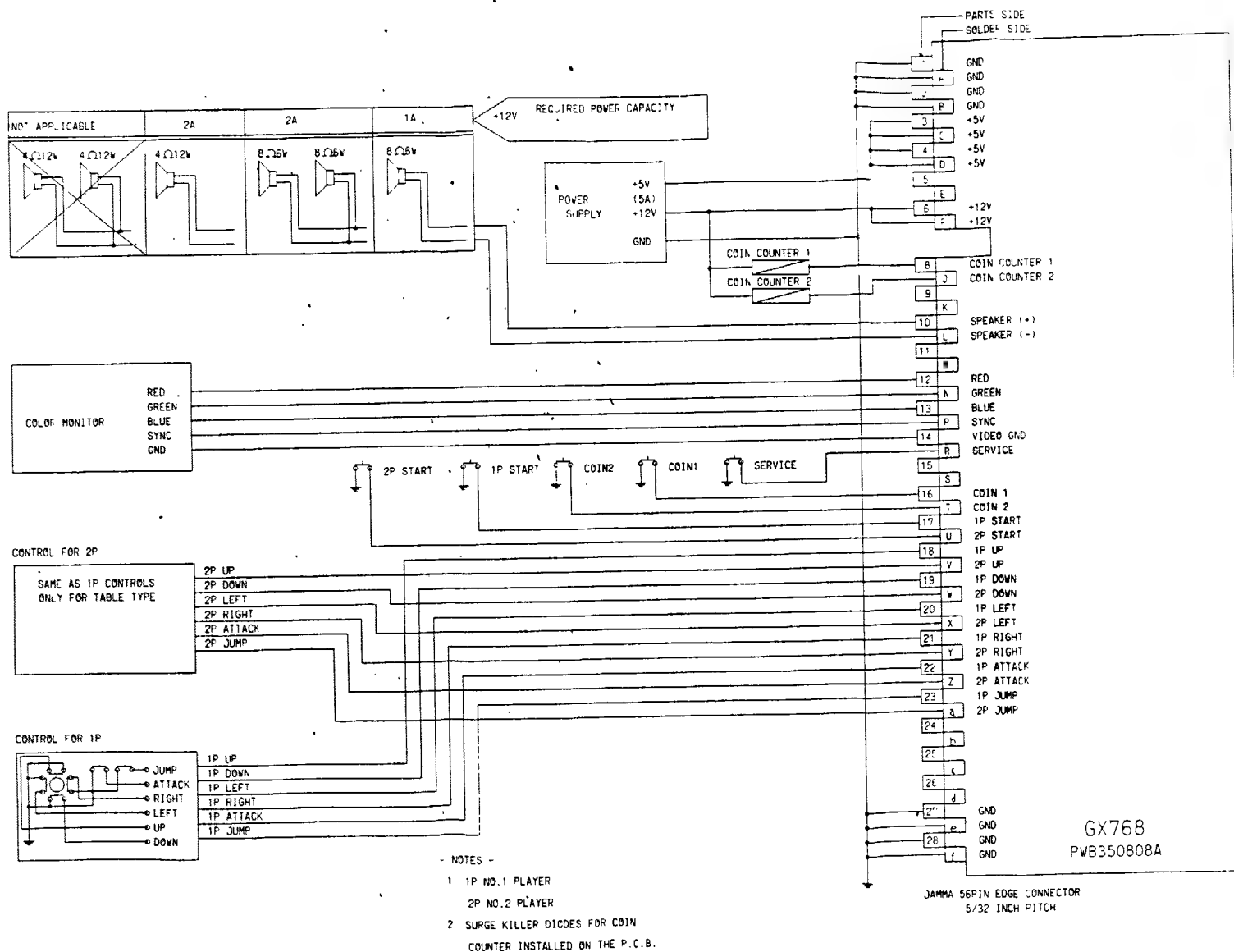
Solder Side ← → Parts Side

WIRE COLOR KEY:

BLACK	GND	A	1	GND	BLACK
BLACK	GND	B	2	GND	BLACK
RED	+ 5V DC	C	3	+ 5V DC	RED
RED	+ 5V DC	D	4	+ 5V DC	RED
GREEN	NOT USED	E	5	NOT USED	GREEN
ORANGE	+ 12V DC	F	6	+ 12V DC	ORANGE
	*KEY	H	7	*KEY	
BROWN/YELLOW <i>Pink/red</i>	COIN COUNTER 2	J	8	COIN COUNTER 1	GREEN/GRAY <i>White/Black</i>
	(EMPTY)	K	9	(EMPTY)	
WHITE/BROWN <i>Yellow</i>	SPEAKER	L	10	SPEAKER	YELLOW/GRAY <i>White</i>
	(EMPTY)	M	11	(EMPTY)	
WHITE/GREEN	VIDEO GREEN	N	12	VIDEO RED	RED/WHITE
WHITE	VIDEO SYNC	P	13	VIDEO BLUE	BLUE/WHITE
RED/YELLOW <i>Yellow/Black</i>	SERVICE SW	R	14	VIDEO GROUND	BLACK
	(EMPTY)	S	15	(EMPTY)	
VIOLET/WHITE <i>Yellow/red</i>	COIN 2	T	16	COIN 1	BLUE/BROWN <i>Yellow</i>
RED/GREEN <i>Blue</i>	2P START	U	17	1P START	PINK/YELLOW <i>Orange/Black</i>
BLUE/YELLOW <i>White/Brown</i>	2P UP	V	18	1P UP	ORANGE/WHITE <i>White/Gray</i>
VIOLET/YELLOW <i>Orange/White</i>	2P DOWN	W	19	1P DOWN	BLACK/WHITE <i>Yellow/Gray</i>
ORANGE/GREEN <i>Orange/Red</i>	2P LEFT	X	20	1P LEFT	RED/GRAY <i>Yellow/Gray</i>
ORANGE/YELLOW <i>Orange/Gray</i>	2P RIGHT	Y	21	1P RIGHT	GRAY/WHITE <i>Orange/Blue</i>
BLACK/YELLOW <i>Gray/Red</i>	2P ATTACK	Z	22	1P ATTACK	PINK/WHITE <i>Gray/Black</i>
ORANGE/GRAY <i>Gray/Green</i>	2P JUMP	a	23	1P JUMP	GREEN/BROWN <i>Gray/Blue</i>
BROWN/WHITE	NOT USED	b	24	NOT USED	RED/BROWN
GRAY/YELLOW	NOT USED	c	25	NOT USED	WHITE/BLACK
BLUE/GRAY	NOT USED	d	26	NOT USED	WHITE/VIOLET
BLACK	GND	e	27	GND	BLACK
BLACK	GND	f	28	GND	BLACK

(BASE COLOR/LINE COLOR)

HAUNTED CASTLE: WIRING DIAGRAM



DIP SWITCH SETTINGS

DIP SWITCH NO. 1 SETTINGS

1. COIN 1

SW	1	2	3	4	COIN	PLAY
•	OFF	OFF	OFF	OFF	1	1
	ON	OFF			1	2
	OFF	ON			1	3
	ON	ON			1	4
	OFF	OFF	ON	OFF	1	5
	ON	OFF			1	6
	OFF	ON			1	7
	ON	ON			2	1
	OFF	OFF	OFF	ON	2	3
	ON	OFF			2	5
	OFF	ON			3	1
	ON	ON			3	2
	OFF	OFF	ON	ON	3	4
	ON	OFF			4	1
	OFF	ON			4	3
	ON	ON			FREEPLAY	

FREEPLAY: You can play game without coins.

2. COIN 2

SW	5	6	7	8	COIN	PLAY
•	OFF	OFF	OFF	OFF	1	1
	ON	OFF			1	2
	OFF	ON			1	3
	ON	ON			1	4
	OFF	OFF	ON	OFF	1	5
	ON	ON			1	6
	OFF	ON			1	7
	ON	OFF			2	1
	OFF	OFF	OFF	ON	2	3
	ON	OFF			2	5
	OFF	ON			3	1
	ON	ON			3	2
	OFF	OFF	ON	ON	3	4
	ON	OFF			4	1
	OFF	ON			4	3
	ON	ON			VOID	

DIP SWITCH NO. 2 SETTINGS

1. CHANGE OF TABLE/UPRIGHT

SW	3	TYPE
•	OFF	TABLE
	ON	UPRIGHT

2. DIFFICULTY OF THE GAME (1)

SW	4	5	DIFFICULTY
•	OFF	OFF	EASY
	ON	OFF	NORMAL
	OFF	ON	DIFFICULT
	ON	ON	VERY DIFFICULT

3. DIFFICULTY OF THE GAME (2)

SW	6	7	STRENGTH OF THE PLAYER
•	OFF	OFF	STRONG
	ON	OFF	NORMAL
	OFF	ON	WEAK
	ON	ON	VERY WEAK

4. SOUND IN ATTRACTIVE MODE

SW	8	SOUND
•	OFF	OFF
	ON	ON

SW1 and SW2 are not used.

DIP SWITCH NO.3 SETTINGS

1. VIDEO SCREEN FLIP

SW	1	
•	OFF	NORMAL
	ON	UPSIDE DOWN

2. SINGLE/DUAL UPRIGHT CONTROL

SW	2	
•	OFF	SINGLE CONTROL UPRIGHT
	ON	DUAL CONTROL UPRIGHT

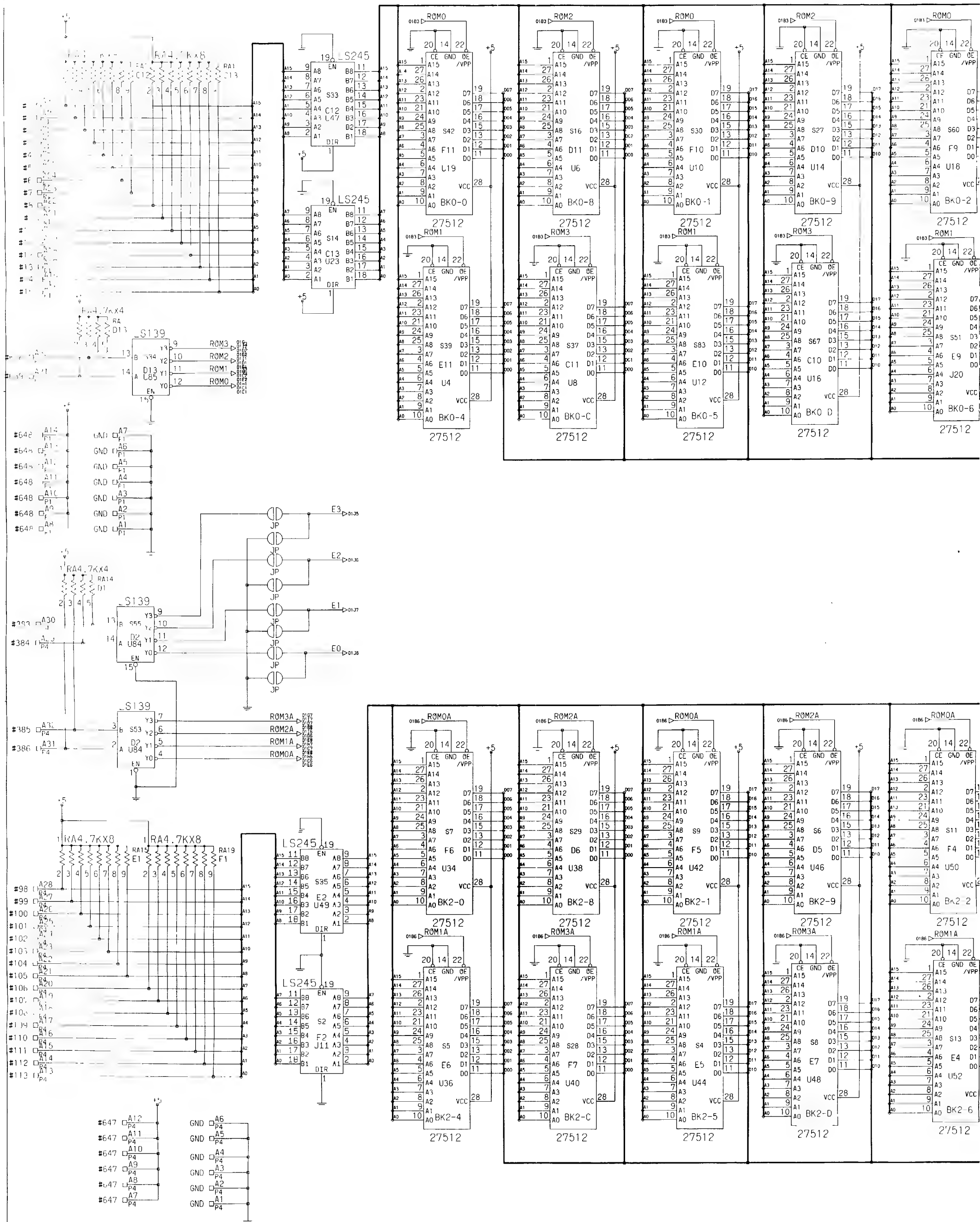
3. CHANGE OF MODE

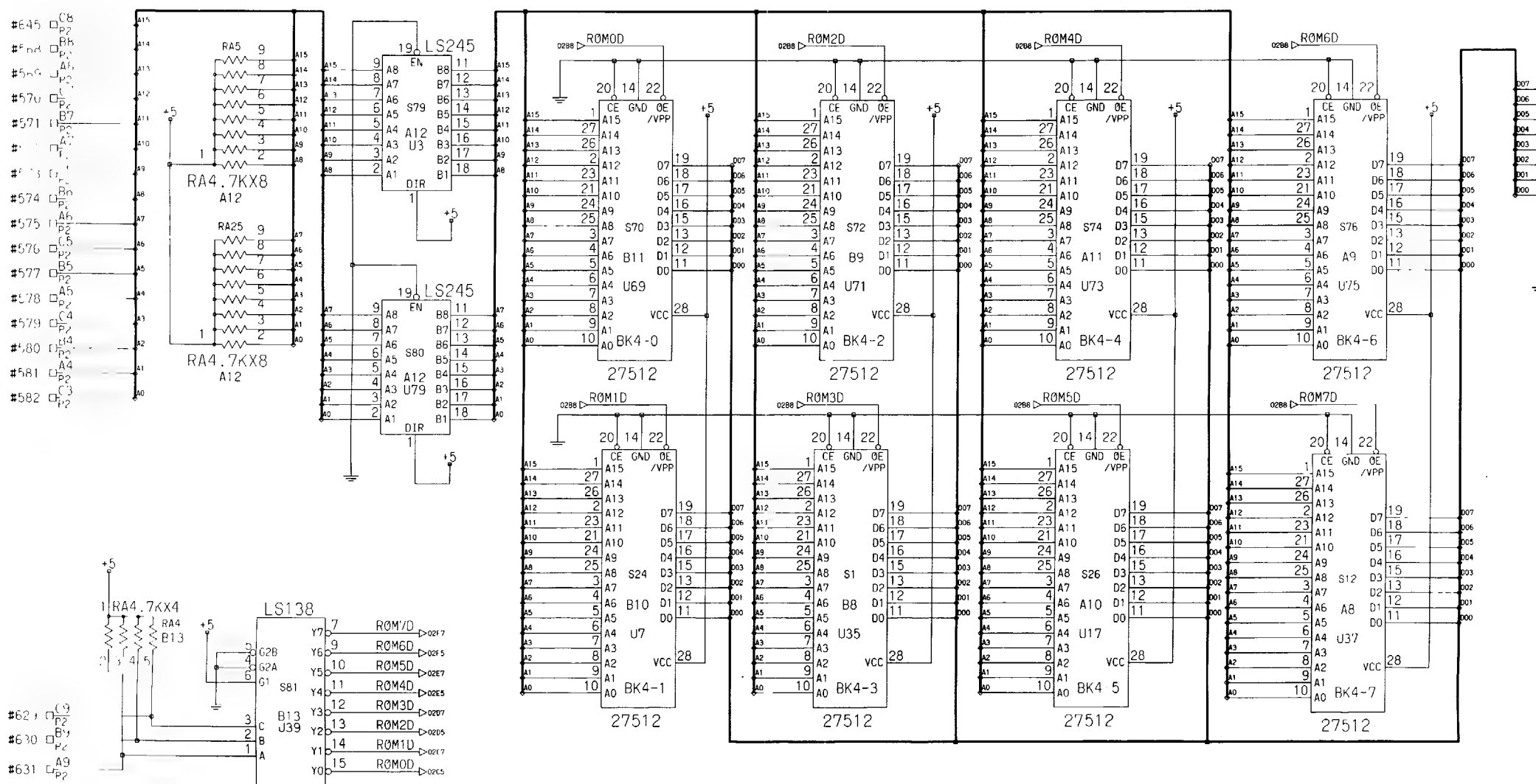
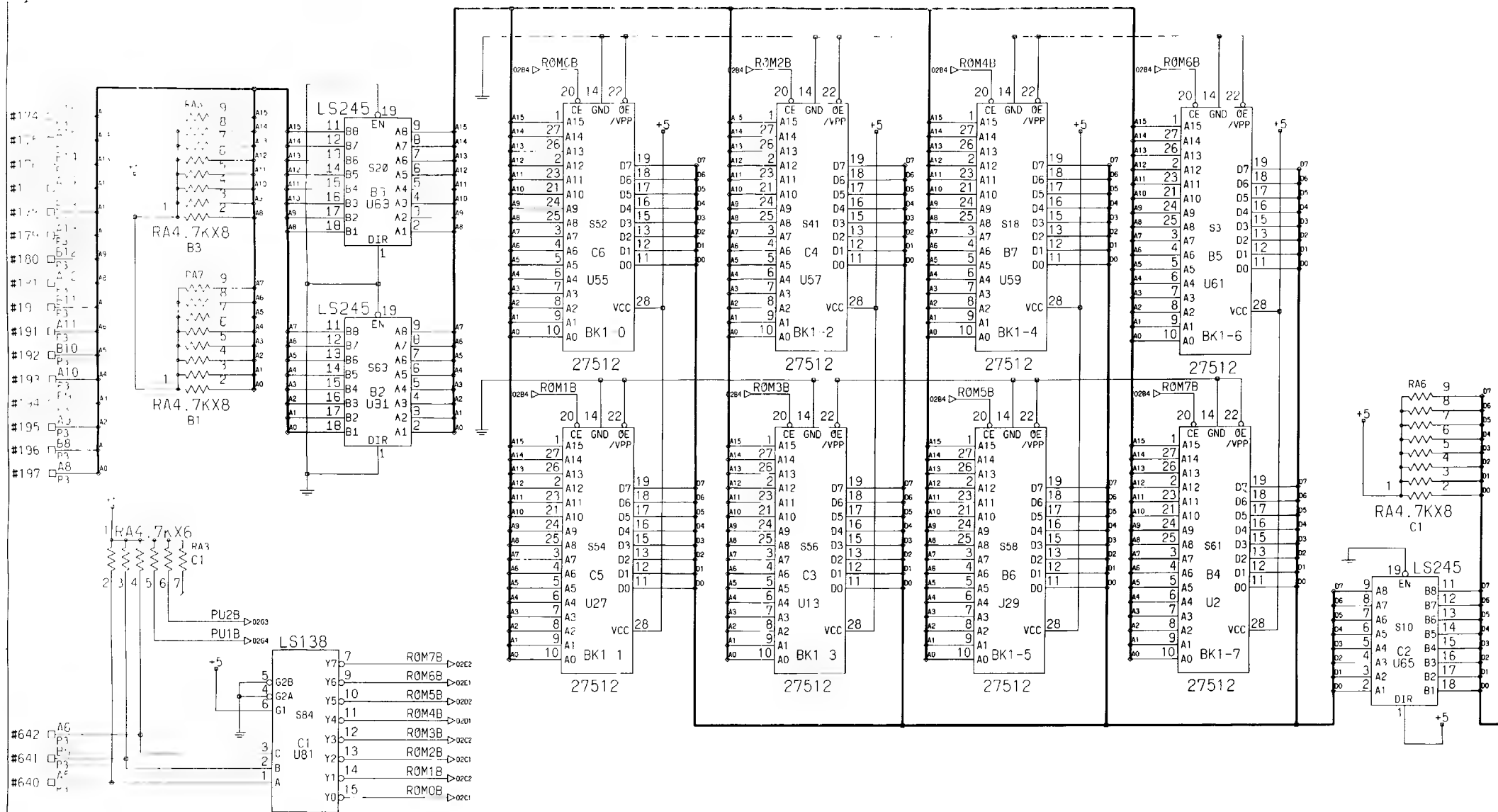
SW	3	MODE
•	OFF	GAME MODE
	ON	TEST MODE

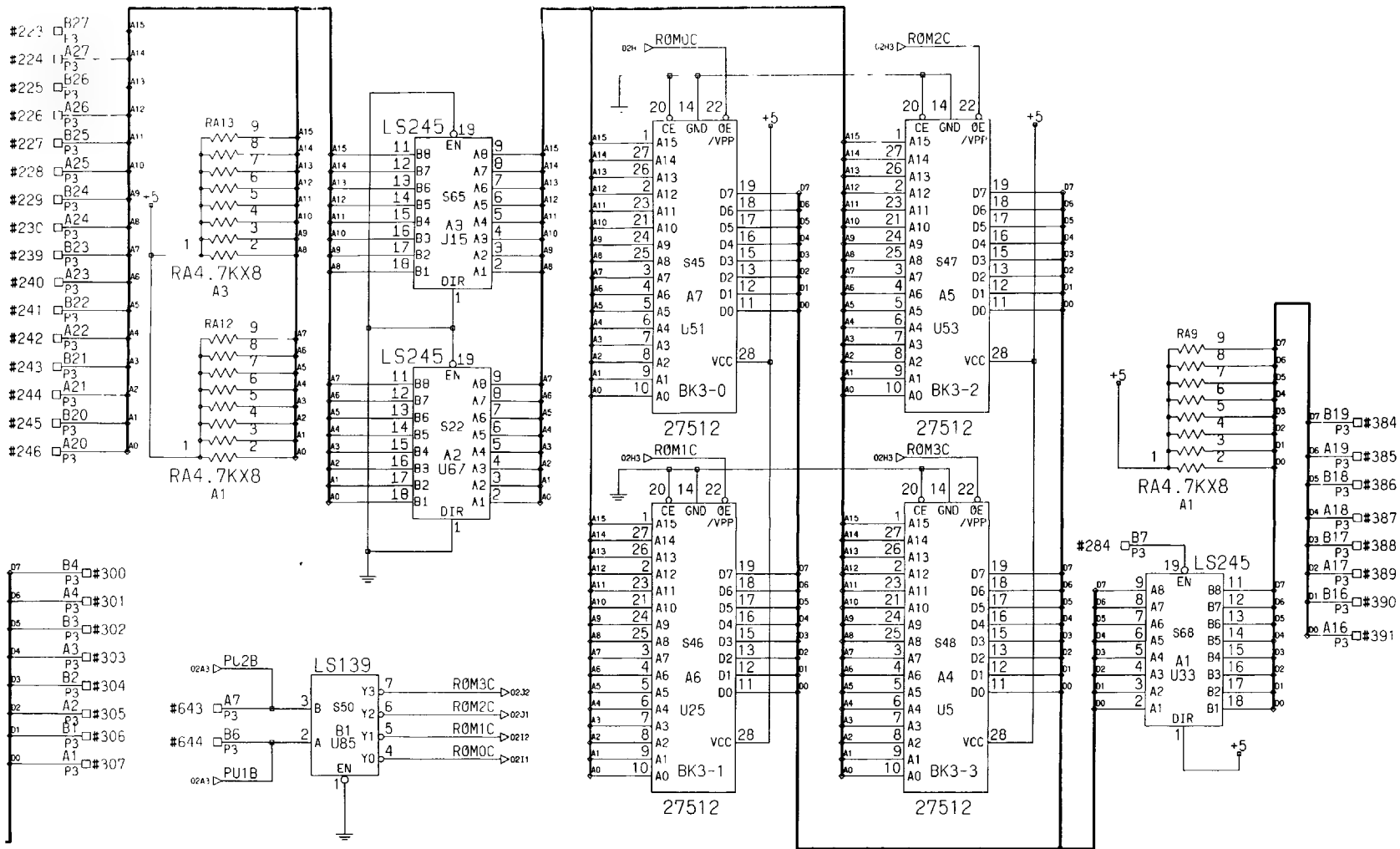
4. CONTINUATION

SW	4	MODE
•	OFF	YES (Up to 3 times)
	ON	NO

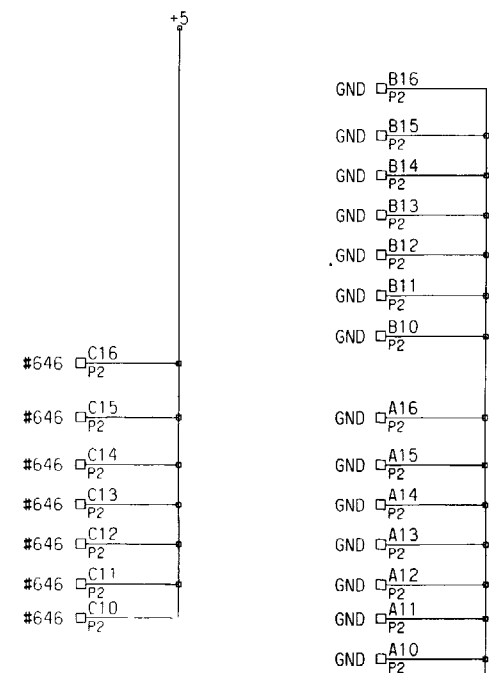
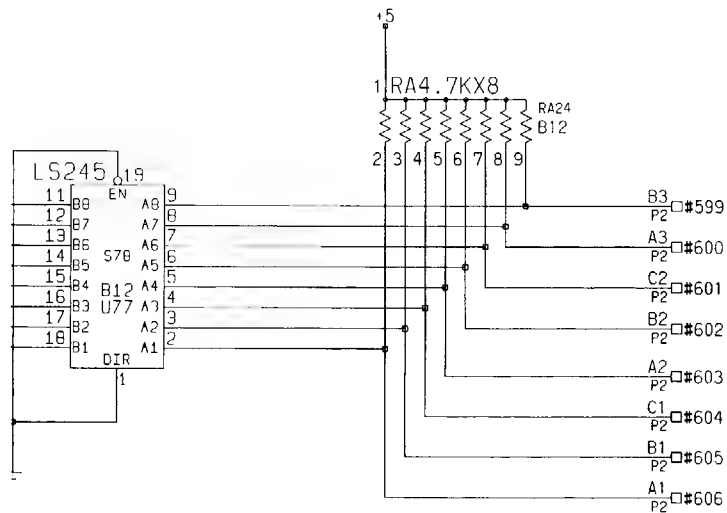
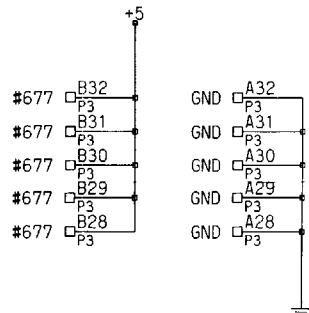
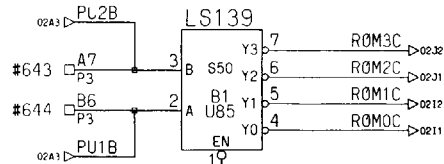
• Shows recommended settings



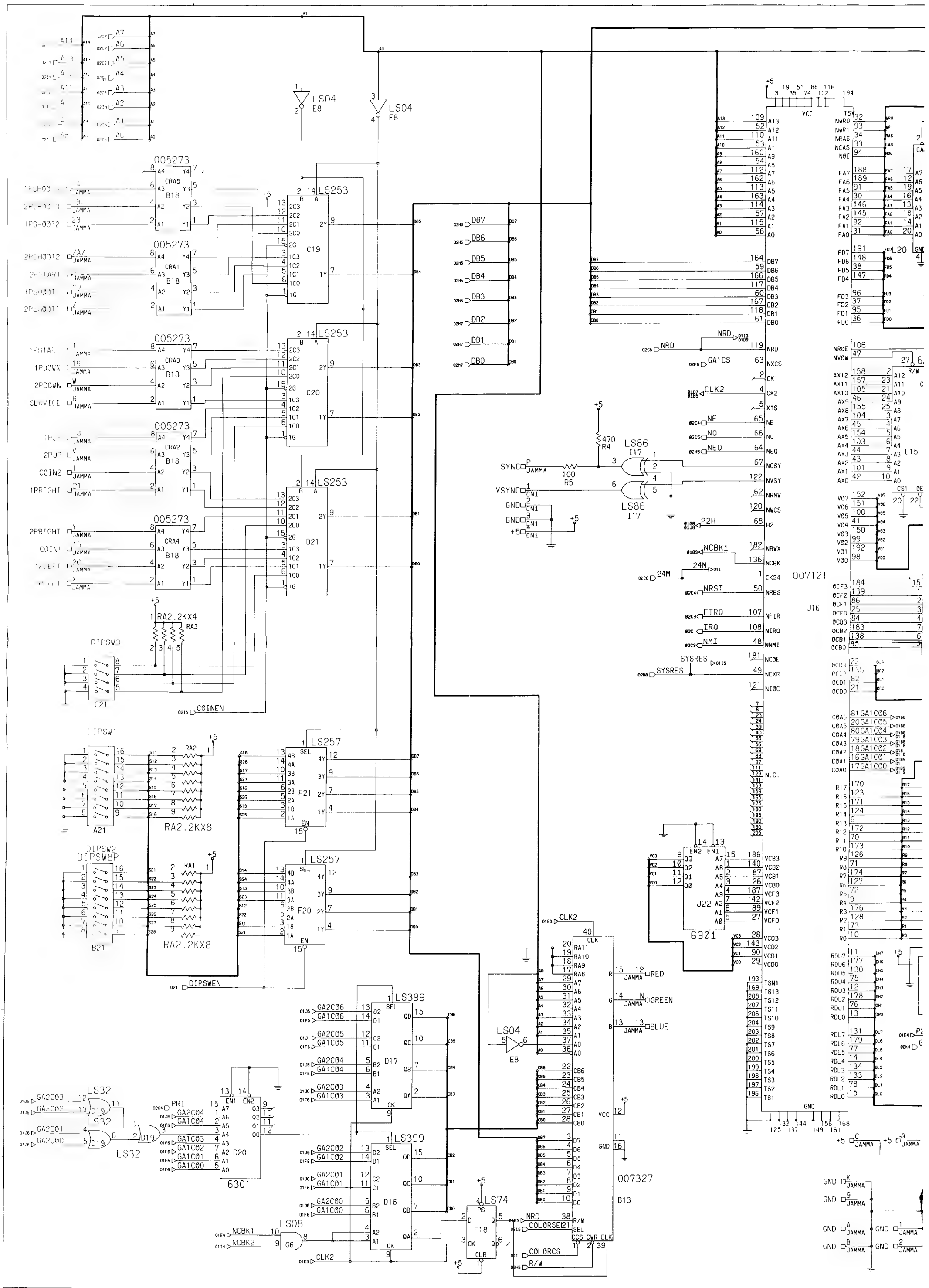


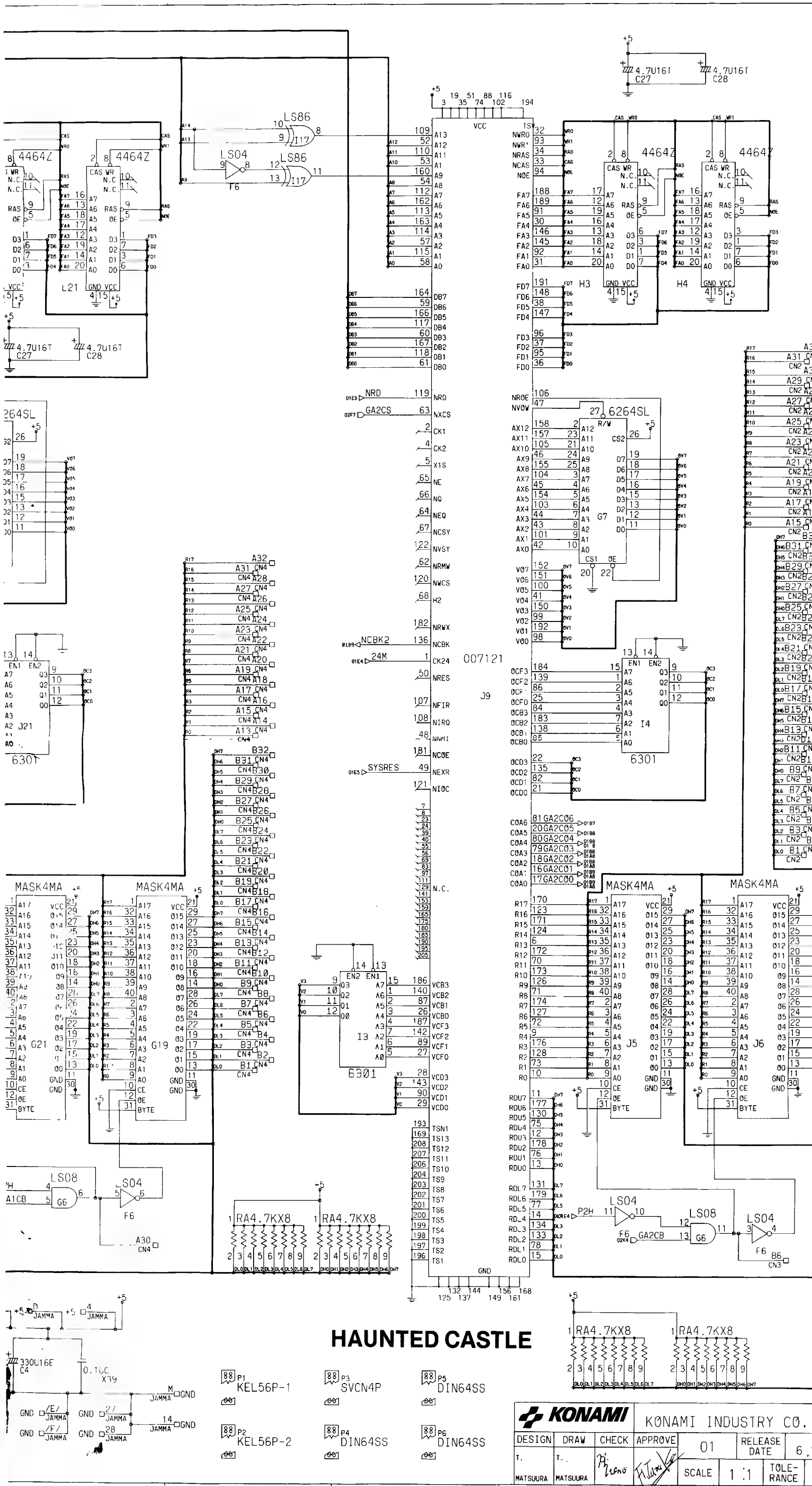


- #223 B27 P3 □#300
- #224 B27 P3 □#301
- #225 B26 P3 □#302
- #226 B25 P3 □#303
- #227 B24 P3 □#304
- #228 B23 P3 □#305
- #229 B22 P3 □#306
- #230 B21 P3 □#307



KONAMI				KONAMI INDUSTRY CO., LTD.		REG. TYPE	02
DESIGN	DRAW	CHECK	APPROVE	RELEASE DATE	NAME	ROM BOARD 26M ✓	
K. BAN				SCALE	TOLE-RANCE	CODE NO.	PWB350782 3/2





NOTE

- +5 : VCC(+5V)
- +12 : VCC(+12V)
- ⊥ : GND
- JAMMA : JAMMA EDGE 56P
- PIN NO.
- ALPHABET: SOLDER SIDE
- NUMBER: PARTS SIDE
- /A/: SMALL LETTER
- CNT : 4P SV CONNECTOR
- CN2 : 64P DIN CONNECTOR
- CN3 : 64P DIN CONNECTOR
- CN4 : 64P DIN CONNECTOR

KINDS OF CAPACITOR

T : TANTALUM

M : MYLAR

E : ELECTROLYTIC

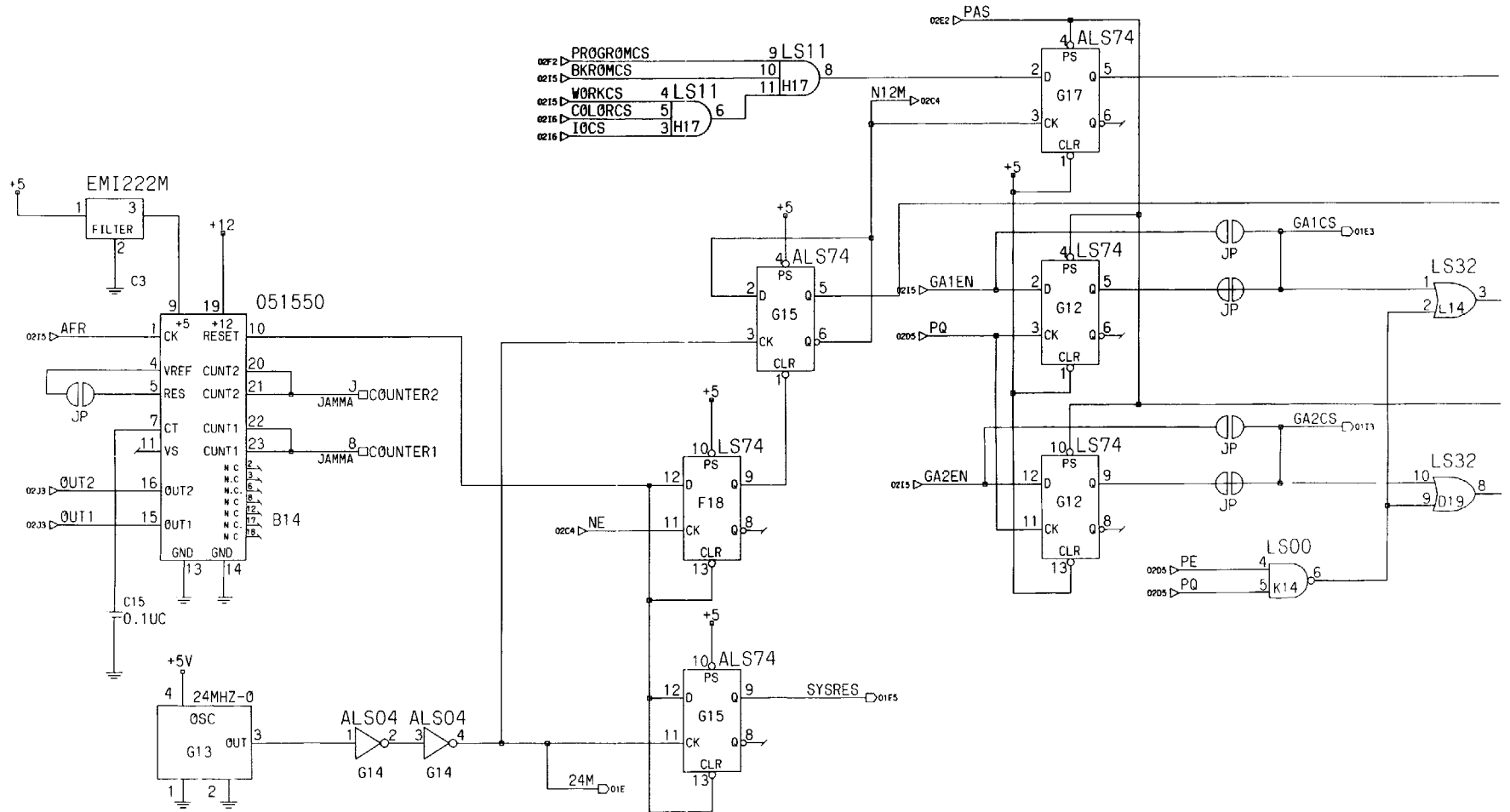
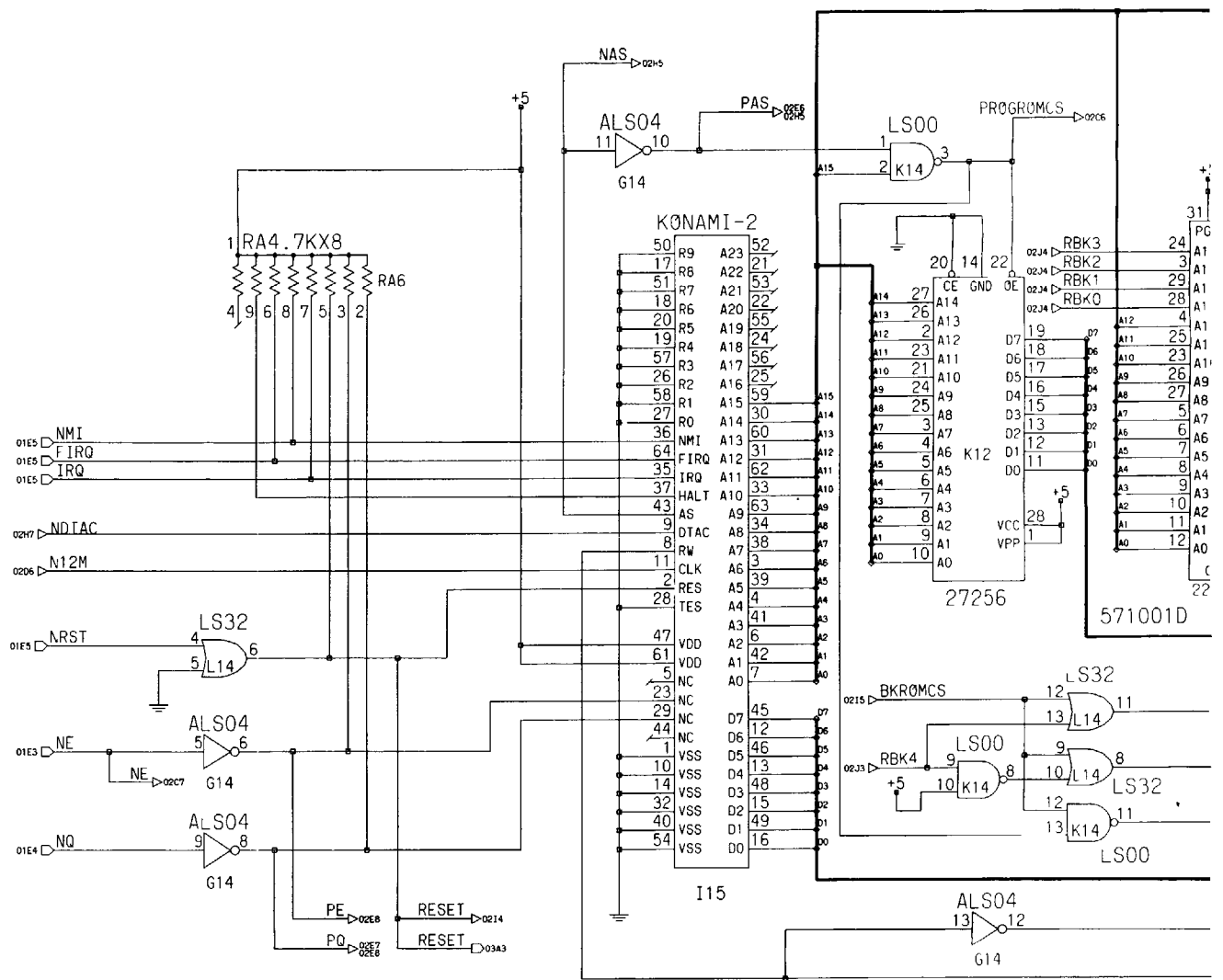
C : CERAMIC



KONAMI INDUSTRY CO., LTD.

REG. TYPE SCHEMATIC DIAGRAM

DESIGN	DRAW	CHECK	APPROVE	01	RELEASE DATE	6.11.87	NAME	GX768 PWB350808A
T.	T.	P.	P.	SCALE	1:1	TOLE-RANCE	A1	CODE NO.
MATSUURA	MATSUURA	P.	P.					100083 1/3




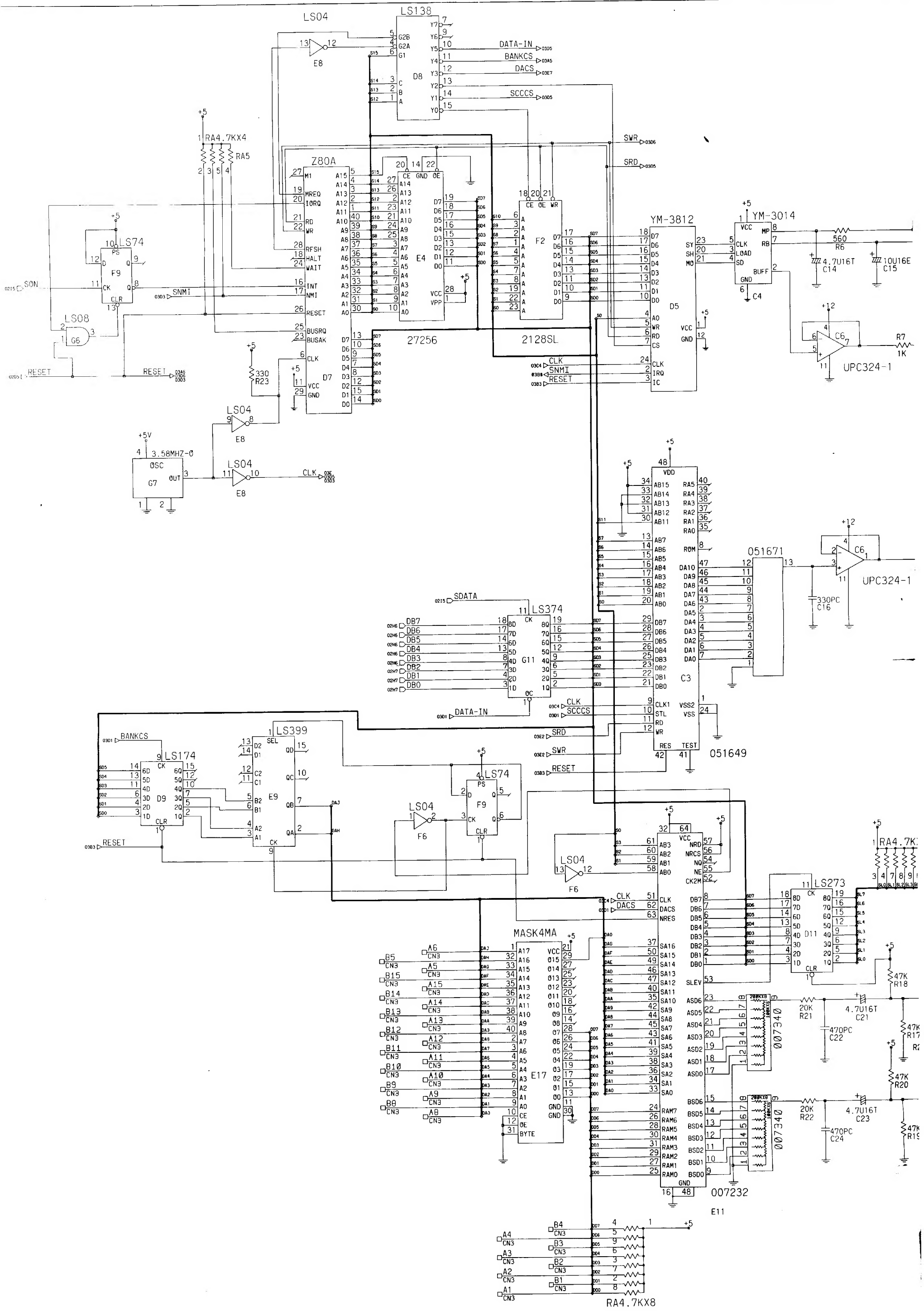


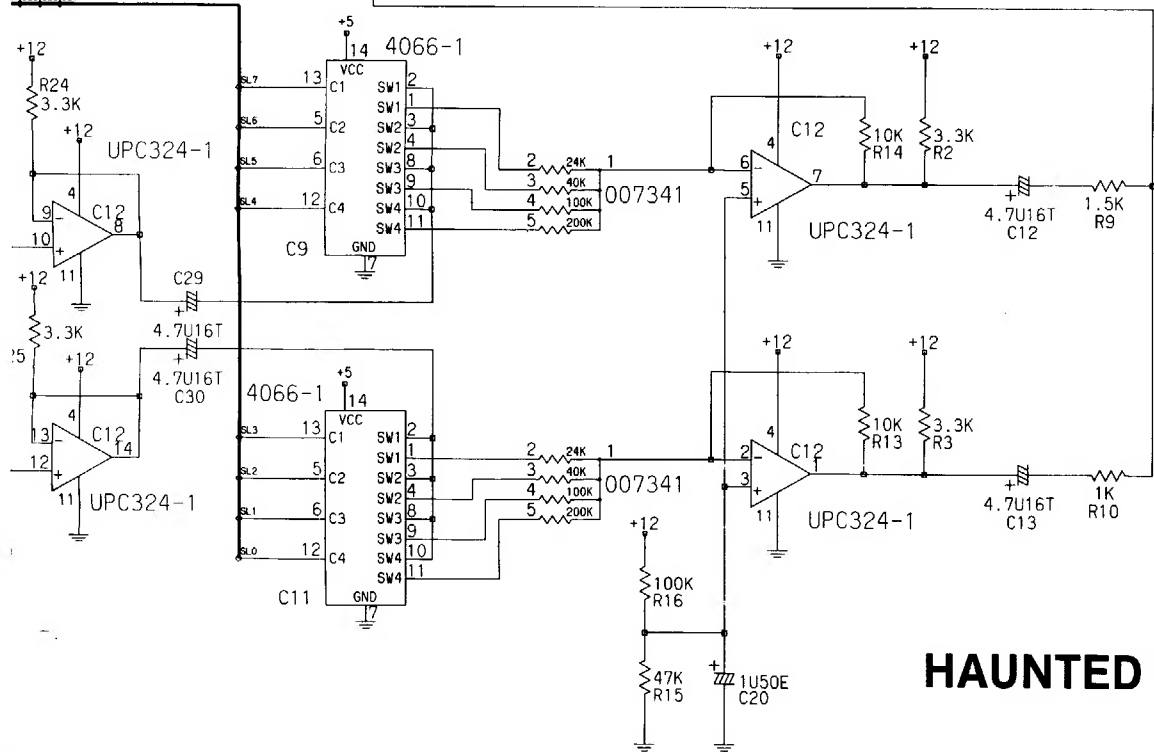
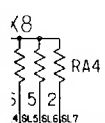
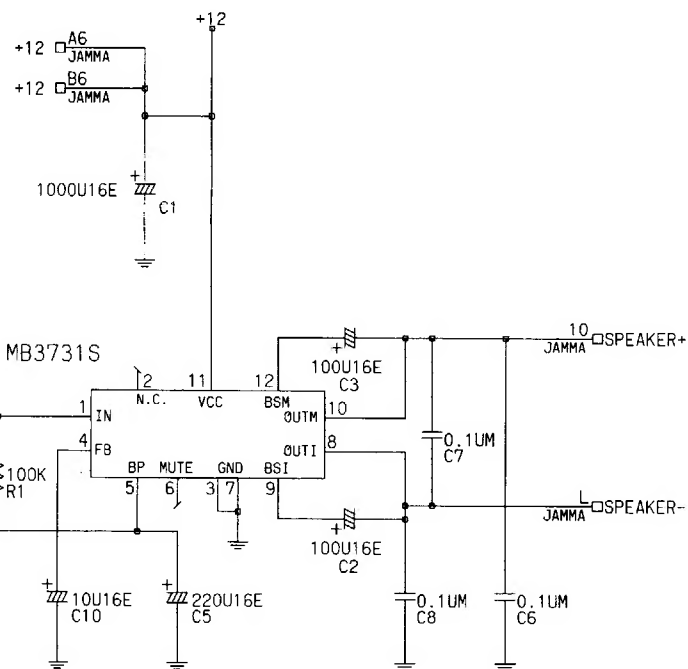
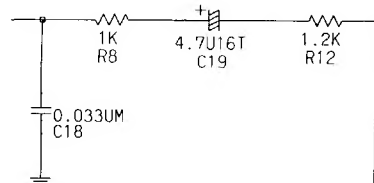
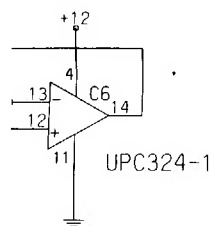
+5 : VCC(+5V)
+1.2 : VCC(+12V)
⏏ : GND
JAMMA □ : JAMMA EDGE 56P
PIN NO.
ALPHABET: SOLDER SIDE
NUMBER: PARTS SIDE
/A/: SMALL LETTER

CNT □ : 4P SV CONNECTOR
CN2 □ : 64P DIN CONNECTOR
CN3 □ : 64P DIN CONNECTOR
CN4 □ : 64P DIN CONNECTOR

KINDS OF CAPACITOR
T : TANTALUM
M : MYLAR
E : ELECTROLYTIC
C : CERAMIC

 KONAMI				KONAMI INDUSTRY CO., LTD.				REG. TYPE	SCHEMATIC DIAGRAM	
DESIGN	DRAW	CHECK	APPROVE	02		RELEASE DATE	6.11.87		NAME	GX768 PWB350808A
T.	T.	<i>H. Ueno</i>	<i>H. Ueno</i>	SCALE	1:1	TOLERANCE	A1		CODE NO.	100083 2/3
MATSUURA	MATSUURA									





HAUNTED CASTLE

NOTE

- +5 : VCC(+5V)
- +12 : VCC(+12V)
- ⊥ : GND
- JAMMA □ : JAMMA EDGE 56P
- PIN NO.
- ALPHABET: SOLDER SIDE
- NUMBER: PARTS SIDE
- /A/: SMALL LETTER
- CNT □ : 4P SV CONNECTOR
- CN2 □ : 64P DIN CONNECTOR
- CN3 □ : 64P DIN CONNECTOR
- CN4 □ : 64P DIN CONNECTOR

KINDS OF CAPACITOR
 T : TANTALUM
 M : MYLAR
 E : ELECTROLYTIC
 C : CERAMIC



KONAMI INDUSTRY CO., LTD.

REG. TYPE SCHEMATIC DIAGRAM

DESIGN DRAW CHECK APPROVE

03

RELEASE DATE

6.11.87

NAME

GX768 PWB350808A

T. MATSUURA

T. MATSUURA

APPROVE

SCALE

1:1

TOLE-RANCE

A1

CODE NO.

100083 3/3

USER INFORMATION
WARNING
F.C.C. REGULATION COMPLIANCE

THIS KIT IS INTENDED FOR USE ONLY ON COIN-OPERATED VIDEO GAMES MANUFACTURED AFTER OCTOBER 1, 1983 WHICH HAVE BEEN VERIFIED FOR COMPLIANCE WITH REQUIREMENTS IN PART 15 OF F.C.C. RULES FOR A CLASS A COMPUTING DEVICE.

IMPROPER CONNECTION OF THIS KIT OR CONNECTION TO ANY OTHER GAME NOT SO MANUFACTURED OR VERIFIED FOR COMPLIANCE MAY CAUSE UNACCEPTABLE INTERFERENCE TO RADIO AND T.V. RECEPTION, REQUIRING THE OPERATOR TO TAKE WHATEVER STEPS ARE NECESSARY TO CORRECT THE INTERFERENCE.

THE P.C. BOARD CAGE SUPPLIED WITH THIS CONVERSION KIT MUST BE UTILIZED AND TERMINATED TO GROUND AT THE TIME OF INSTALLATION.



815 Mittel Drive, Wood Dale, Illinois 60191
Telephone: (312) 595-1443, Telex: 6871385 KONAM UW, Fax: (312) 595-2973